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analogues and derivatives thereof which retain activity of the native sequence, wherein said peptide has the following characteristics:

- (a) it is a substantially homogenous preparation;
- (b) it has at least 80% homology to any one of the sequences of SEQ ID NOS: 2-10 and 18, and
- (c) said leptin peptide modulates body mass.

4. (Amended three times) A leptin peptide consisting essentially of the amino acid sequence Xaa_n-Ser-Cys-Xaa₁-Leu-Pro-Xaa₂-Xaa₃-Xaa_n, wherein:

- (a) either Xaa_n is zero or a contiguous stretch of at most seven peptide residues derived from SEQ ID NOS: 1 or 17; and
- (b) Xaa₁, Xaa₂ and Xaa₃ is any amino acid substitution;

wherein said leptin peptide has leptin or leptin-like activity.

12. (Amended three times) A peptide consisting essentially of an amino acid sequence of the leptin protein of any one of SEQ ID NOS:1 and 17, and selected from the group consisting of:

- (i) a sequence comprising amino acids 21-35 (SEQ ID NO:3);
- (ii) a sequence comprising amino acids 31-45 (SEQ ID NO:4);
- (iii) a sequence comprising amino acids 41-55 (SEQ ID NO:5);
- (iv) a sequence comprising amino acids 51-65 (SEQ ID NO:6);
- (v) a sequence comprising amino acids 61-75 (SEQ ID NO:7);
- (vi) a sequence comprising amino acids 71-85 (SEQ ID NO:8);
- (vii) a sequence comprising amino acids 81-95 (SEQ ID NO:9);
- (viii) a sequence comprising amino acids 91-105 (SEQ ID NO:10);
- (ix) a sequence comprising mouse amino acids 116-122 (SEQ ID NO:2);
- (x) a sequence comprising human amino acids 116-122 (SEQ ID NO:18);

and fragments, derivatives, homologs and analogs thereof.

61. (amended once) A purified peptide comprising the amino acid residue sequence of SEQ ID NO:18.